



10982031-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Shirley Lee et al.

Serial No.: 09/702,185

5 Filing Date: October 30, 2000

Title: INK AND UNDERPRINTING FLUID COMBINATIONS WITH
IMPROVED INKJET PRINT IMAGE COLOR AND STABILITY

#15/80
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DECLARATION UNDER 37 CFR §1.132

I, Shirley Lee, am the primary inventor in the above-referenced application. Over several years working in the research and development of inkjet ink at HP, I have become very familiar with various inkjet inks along with their use in combination with underprinting and/or overprinting fixers. In the course of my work, I have also
15 interacted with researchers from other companies in the inkjet field and am reasonably familiar with the additives developed and used in both inkjet ink and underprinting fixer in the inkjet field outside of HP.

I am familiar with U. S. Patent No. 5,889,083 (Zhu) and the related EPO 735120
20 provided by the Examiner. Zhu et al uses an anionic dye or pigment and a wax with an anionic styrene-copolymer as a binder to bind the ink with the wax onto, preferably, a non-porous media, but also onto porous media, giving the ink improved scratch and rub resistance. This application also utilizes the binding or film forming property of styrene-copolymer with the wax. EPO 735120 uses an anionic dye or pigment, with
25 anionic styrene-copolymer as a binder to bind the ink (without wax) onto, preferably, a non-porous media, but also onto porous media, giving the ink greater adhesion and water resistance.

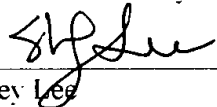
In contrast, the present application has anionic colorant (dye or pigment), with anionic
30 styrene-copolymer to bind with the cationic underprinting fluid. We achieve enhanced chroma by binding the anionic dye/pigment and anionic copolymer with the cationic underprinting fluid.

If the disclosed system of either Zhu et al or EPO 735120 had the cationic underprinting fluid, the underprinting fluid would interfere with the film forming ability of the styrene-copolymer, so that no scratch-resistance and rub-resistance would be achieved and binding of the ink to the substrate would be significantly affected.

One having experience working with inkjet inks interacting with underprinting fluids and reading either Zhu et al or EPO 735120 would not be motivated to combine the inks disclosed in either Zhu et al or EPO 735120 with cationic underprinting fluids because of its negative effects on the desirable qualities of the inks disclosed in the two patents.

All statements made in this Declaration which are of my own knowledge are true and all statements made on information and belief are believed to be true. I have also been warned that willful false statements and the like are punishable by fine or imprisonment or both (18 U.S.C. 1001) and that such false statements may jeopardize the validity of the present application or any patent issuing therefrom.

Further declarant sayeth not.


Shirley Lee

Date: Nov. 6, 2002